

IN A STATE OF EMERGENCY? ASSESSING FIRE RISK IN CAMBRIA

INTRODUCTION

Cambria is a coastal community long known for water supply issues. As of March 2015, it remains in a Stage 3 (most severe) water emergency. Cambria also faces another severe, but less recognized emergency risk—the potential for a catastrophic fire. The risk level for such a fire is heightened by the town’s combination of geography, urban buildup and current drought.

This investigative report evaluates the current fire risk as assessed by firefighting professionals. It also examines the community’s preparedness for a disastrous fire. It then examines opportunities to mitigate the risk and offers recommendations for responding to the current situation.

ORIGIN

In reviewing a separate issue, the Cities and Special Districts Committee of the 2014-2015 San Luis Obispo County Grand Jury (Grand Jury) identified concerns about the status of local firefighting equipment. This led to inquiries about fire suppression services in general and the level of fire risk in the Cambria area.

AUTHORITY

California Penal Code section 925 authorizes the Grand Jury to investigate and report on the operations, accounts and records of special districts within the county.

METHOD

The Grand Jury conducted the investigation through interviews of relevant staff members and board members of key organizations, including CAL FIRE, Cambria Community Services District (CCSD), CCSD Fire Department (Cambria FD) and San Luis Obispo County Community Firesafe Council (SLO Firesafe Council). It also interviewed two former local fire chiefs. The Grand Jury reviewed a number of relevant documents, including organizational websites, National Fire Protection Association (NFPA) guidelines, Cambria FD planning and strategy documents, Cambria FD general plan, and the wildland-urban interface¹ fire (WUI fire) pre-plan for the Cambria area. In addition, the Grand Jury attended three separate student team presentations at California Polytechnic State University, San Luis Obispo. Cambria was the subject of these students' winter project in a class on WUI Fire Protection and their findings and recommendations were presented to a public audience.²

BACKGROUND

Two organizations provide fire suppression services for Cambria:

- The CCSD provides the community with water and wastewater treatment, parks and recreation, and fire and safety services. It maintains a fire station at 2850 Burton Drive in Cambria. This station is staffed 24 hours a day by a three-person team that includes a captain, engineer and a reservist.
- CAL FIRE³ operates Fire Station 10 at 6126 Coventry Lane in Cambria. During fire season⁴, a team of one captain (or engineer) and three firefighters staff the CAL FIRE station around the clock. During other periods, a team of one captain (or engineer) and

¹ A wildland fire is a fire in a forest, grassland or brushland. A wildland-urban interface fire involves wildland areas but also people and built environments such as homes, businesses and infrastructure.

² Copies of these student reports can be obtained by contacting the Natural Resources Management & Environmental Sciences Department at the university.

³ CAL FIRE is the fire protection arm of the California Department of Forestry and Fire Protection. It protects State Responsibility Areas (SRA) and is the agency with which San Luis Obispo County contracts to provide fire suppression services for certain county areas. All of Cambria is within the SRA. SRAs are defined by the California Public Resources Code Sections 4125 and 4126.

⁴ Fire season generally is considered the summer and autumn months, but exact dates may vary based upon rainfall and other conditions.

one firefighter staff the station. This is a state-funded station. (San Luis Obispo County augments funding during non-fire season through the Amador Plan.⁵)

Cambria FD and CAL FIRE have a mutual/automatic aid agreement. In the case of a larger fire, call for aid may go to Hearst Castle Fire Department (10 minutes away), Cayucos Fire Department (20 minutes away), Morro Bay Fire Department (30 minutes away), Paso Robles County Fire Station (30 minutes away) or additional CAL FIRE or San Luis Obispo County resources elsewhere in the county. Due to budget cuts, the Hearst Castle Fire Department currently may not respond to calls outside the state park. In the event of a major WUI fire, fire suppression resources would come from throughout the state.

NARRATIVE

Cambria is bounded by ocean on one side and otherwise is separated from other communities (and their fire and emergency departments) by miles of open land and ranches. It is nestled in one of only three remaining natural stands of Monterey pine⁶ in the world. Popular with tourists, seasonal homeowners and retirees, its permanent population of approximately 6500 may vary greatly depending on the time of year. A multi-year drought has increased the community's longstanding water-supply issue. It has also increased both the likelihood of a catastrophic WUI fire and the difficulty in suppressing one.

THE RISK OF CATASTROPHIC FIRE

A number of factors place Cambria at particularly high risk for major WUI fires:

- Unlike most of the developed areas of San Luis Obispo County, Cambria's hilly terrain is forested. Because of the drought, its 3200-acre, native Monterey pine forest is riddled with thousands of dead trees. It has been estimated that 30% to 40% of the overall forest

⁵ The Amador Plan refers to state law that allows the director of CAL FIRE to enter into an agreement with another governmental organization to provide fire suppression services. California Public Resources Code Section 4144 authorizes the Amador Plan.

⁶ The other two natural stands are in Monterey and Ano Nuevo (near Santa Cruz, California). In addition, two populations of a two-needle variety exist on two small Mexican islands called Cedros and Guadalupe, off the coast of Baja California.

is either dead or dying, compared to 10% historically. These dead trees are much more susceptible to burning and they significantly increase the risk of a wildland fire spread.

- A break in the drought will not restore life to these dead trees; until these trees are dealt with, their fire risk will remain. A continuation of the drought will only increase the likelihood of more dead and dying trees. The poor health of the forest has also led to an increased presence of bark beetles, pitch canker and dwarf mistletoe—all of which increase tree mortality. In some individual stands of trees, as many as 70% are dead or dying.



The photo illustrates the extent of dead trees in the Scott Rock area of Cambria (across from Coast Union High School) as of January 2015.

- Much of the area's development (more than 4610 habitable structures) is characterized by small lots, narrow winding streets, steep hillside building sites, and existing structures that don't meet current building standards and fire codes. According to local fire officials, fire can spread easily and quickly in these settings.
- The community has limited water sources; moreover, its existing water infrastructure is aging and subject to service interruptions. Adequate water for a major fire could be an issue.
- The area is serviced by aboveground electrical power lines. Even with tree trimming by PG&E contractors, strong winds may cause falling trees to hit power lines. This increases the risk of a fire starting. Strong winds might also cause trees to fall across roadways, blocking traffic and impeding both evacuation and response.

- Because of Cambria’s isolation, initial response to a fire is limited to the combination of the Cambria FD and CAL FIRE units. In general, additional response is at least 20 minutes away.
- There has been no large fire in the area for the past 70 years. This has resulted in a significant accumulation of highly flammable ground litter and ladder fuels.⁷

Cambria is rated by the state as a High Fire Hazard Zone.⁸ However, all fire professionals that the Grand Jury interviewed describe the current situation in even more vivid language. One said, “Cambria is approaching an extreme fire hazard.” Another former fire captain familiar with the area called the situation “very serious to borderline dangerous.”

Multiple fire professionals liken the Cambria situation to two prior fires in California. One of those is the 1987 Pebble Beach fire in Monterey County (also known as the Morse Fire). This fire occurred in a Monterey pine forest that was less densely developed than Cambria. In that wind-driven fire with winds of 20 miles per hour, 36 homes were lost and 100 families displaced. The other comparison is to the Oakland Hills firestorm of 1991 (also known as the Tunnel Fire). This fire occurred in a forested urban area of older homes with narrow, hilly streets. That fire quickly spread across 1500 urban hillside acres, destroyed 2900 buildings and killed 25 people.

PREPARING FOR THE POTENTIAL OF CATASTROPHIC FIRE

While no government agency can possibly staff resources to deal with every possible catastrophe, it can pre-plan to deal with them effectively and efficiently. In this regard, two key considerations for Cambria’s pre-planning are evacuation plans and fire hazard mitigation.

Alerting and evacuating residents of Cambria is a challenge for a number of reasons, including:

- Reverse 911 calls that alert the need to evacuate or take other actions may have limited impact. Increasingly, local residents do not have land lines which are automatically tied into a reverse 911 system. Residents that rely on mobile phones must register their

⁷ A ladder fuel is a firefighting term for live or dead vegetation that allows a fire to climb from the landscape or forest floor into the tree canopy. This can result in a running crown fire, the most intense and difficult type of wildland fire to control. Common ladder fuels include tall grasses, shrubs and tree branches, both living and dead.

⁸ CAL FIRE uses ratings to express the overall fire risk potential. The highest rating is Very High Fire Hazard Zone. The second highest is High Fire Hazard Zone.

numbers with reverse 911, or they will not receive alerts. The large seasonal and visitor population is unlikely to be registered with reverse 911. Since Cambria is outside the Pacific Gas & Electric Company Early Warning System boundaries, the community cannot be alerted by the sounding of emergency sirens.

- Land entrance and exit to the town is limited to Highway 1 with all streets funneling to that one route. Many of those streets are narrow and winding, creating difficulty both for fire equipment access and residential evacuation. Even under non-emergency conditions, access can be difficult.
- Evacuation plans are available on the CCSD website and in local phonebooks. The plan has been mailed in the past to local addresses, but general awareness of these plans appears limited.
- The population is aging⁹, with many having mobility issues, increasing the difficulty of a rapid evacuation.

In the case of a major fire emergency, the decision to evacuate Cambria would be made by a unified incident command comprising the Cambria FD and CAL FIRE. The anticipated first request would be for the San Luis Obispo County Sheriff (Sheriff's office) to activate the reverse 911 call process and provide evacuation assistance and traffic control.

A number of steps have been taken to prepare for a potential WUI fire in the Cambria area.

These include:

- Development of a WUI fire pre-plan. Because of the major concerns for potential WUI fire in the area, CCSD, CAL FIRE, the San Luis Obispo County Office of Emergency Services and the Sheriff's office developed a pre-plan in 2010. It outlines recommended preparation steps, provides a checklist to follow when evacuation is required and identifies emergency travel routes and safe refuge areas.
- Creation of fire or fuel breaks. In the past, work has been done on establishing fuel breaks. Currently, community agencies are seeking grants to fund additional work to clear the forest of dead and dying trees, manage the forest and align the work of various

⁹ Nearly one-third of the population is over 65 and the median age is 57.1 years. Source: 2010 U.S. Census.

interested groups¹⁰ in Cambria, but there is no guarantee these funds will be granted nor sufficient. Clearing dead trees would significantly mitigate the fire risk.

- Enhancement of community response. This is accomplished through programs such as Community Emergency Response Teams (CERT), use of social media to spread alerts, practice drills and other local outreach.

Additional resources are likely available on a county, state or federal level to augment these activities. If the CCSD were to declare Cambria in a local emergency regarding fire risk, or request San Luis Obispo County to declare such an emergency, or take other similar public positions, it would raise local awareness of the risk and help in obtaining outside grants or other funding by county, state or federal governments.

The CCSD might also examine how other communities faced similar risk. Some ten years ago, the Lake Arrowhead area of San Bernardino County dealt with a dying forest caused by an extended drought and pine beetle infestation. In that instance, a combination of local government actions encouraged clearing of dead trees and received assistance from inmate crews provided through CAL FIRE.

CONCLUSIONS

Due to its environment, location and population, Cambria is a wildland-urban interface community facing a severe fire threat. There are steps local government should take to raise the public's awareness and understanding of the risk, to reduce the level of fuel in the forest and to prepare for emergency response. An initial step would be for the local governing agency, the CCSD, to declare a local emergency related to the fire risk in Cambria.

¹⁰ A number of nonprofits and independent groups in Cambria have interests in managing local forests, including Friends of the Fiscalini Ranch, Greenspace-Cambria Land Trust, Covell Ranch/The Nature Conservancy, Beautify Cambria and the Cambria Forest Committee.

FINDINGS

F1. The community of Cambria faces a severe fire threat due to a combination of environmental, geographical and demographic factors.

F2. The plan for public evacuation in the event of a wildland-urban interface fire or other emergency is not well understood or publicized within the community.

F3. While the execution of the emergency evacuation plan is ultimately the responsibility of the Sheriff's Department, the promotion of the plan is the responsibility of the Cambria Community Services District.

F4. Work on improving fire breaks and removing dead trees or other fire hazards would lessen the fire risk.

RECOMMENDATIONS

R1. The Cambria Community Services District should request that a local emergency be declared regarding the fire risk and forward it to the San Luis Obispo County Board of Supervisors for ratification.

R2. If the Cambria Community Services District fails to request a local emergency, the San Luis Obispo County Board of Supervisors should do so on its own.

R3. The Cambria Community Services District should take additional action to raise public awareness locally and with relevant county, state and federal emergency management agencies. Such actions might include conducting community drills, conducting a new campaign for reverse 911 sign-ups for mobile phones and mailing the wildfire evacuation plan to residents.

R4. The Cambria Community Services District should obtain funding to improve forest management.

R5. The Cambria Community Services District should use the funding to:

R5(a): Improve existing fuel breaks.

R5(b): Expand fuel break program.

R5(c): Remove dead and dying trees.

R5(d): Remove other fire hazards such as ladder fuels and other flammable materials.

REQUIRED RESPONSES

The Cambria Community Services District is required to respond to Findings 1, 2, 3 and 4, and Recommendations 1, 3, 4 and 5(a, b, c, d).

The San Luis Obispo County Board of Supervisors is required to respond to Findings 1 and 2, and Recommendations 1 and 2.

The responses shall be submitted to the Presiding Judge of the San Luis Obispo County Superior Court. Please provide a paper copy and an electronic version of all responses to the Grand Jury.

Presiding Judge	Grand Jury
Presiding Judge Dodie Harman Superior Court of California 1035 Palm Street, Room 355 San Luis Obispo, CA 93408-1000	San Luis Obispo County Grand Jury P.O. Box 4910 San Luis Obispo, CA 93403-4910 grandjury@co.slo.ca.us